

Amendment C and RCE

Appln. No.: 10/727,615

Filing Date: Dec. 5, 2003

Title: ANTI-TRACTION, MOBILITY DENIAL METHODS AND PRODUCTS

Reply to Office Action of March 22, 2007

REMARKS/ARGUMENTS

This Amendment is in response to the Final Office Action of March 22, 2007. Reconsideration and allowance of the subject application, as amended, are respectfully requested.

Amendments to the Claims

Claim 1 has been amended to recite that the polymer particles have a mean particle size of less than about 0.5 mm to about 0.425 mm. Support can be found at paragraph [0048] of the published application which recites that the mean particle size may be less than about 0.5 mm and preferably about 0.425 mm. Accordingly, no new matter has been entered.

Claim 1 has also been amended to recite that the ratio of water to said polymer particles ranges from 7:1 to 16:1 by weight. Support can be found in dependent claim 5 which has been cancelled. Accordingly, no new matter has been entered.

Claim 12 has been amended to recite a method of reducing mobility over a target surface. Support for this amendment may be found throughout the application, for example, in paragraphs [0004], [0012]-[0014], and [0034]-[0044]. Accordingly, no new matter has been added.

Claim 12 has also been amended to recite that the polymer particles are selected from the group consisting of acrylic polymers, polyacrylates, polyacrylamides, polyacrylic acids, and copolymers thereof and have a mean particle size of about 0.01 to 0.5 mm. Support can be found at paragraphs [0021] and [0023] of the published application. Accordingly, no new matter has been entered.

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Claim 12 has also been amended to recite that the ratio of the polymer particles and the water is based on, at least in part, a type of target surface. Support for this amendment may be found, for example, in paragraph [0029]. In addition, the ratio of water to polymer particles is recited to be from 7:1 to 16:1 by weight. Support can be found in dependent claim 13 which has been cancelled. Accordingly, no new matter has been added.

In addition, Claim 12 has been amended to recite coating at least a portion of the target surface with the anti-traction material at a thickness based on, at least in part, the type of target surface to reduce mobility over the portion of the target surface. Support for this amendment may be found, for example, in paragraph [0031]. Accordingly, no new matter has been added.

Claim 15 has been amended to depend from independent claim 12. Accordingly, no new matter has been added.

Claim 18 has been amended to recite that the polymer particles have a mean particle size of less than about 0.5 mm to about 0.425 mm. Support can be found at paragraph [0048] of the published application which recites that the mean particle size may be less than about 0.5 mm and preferably about 0.425 mm. Accordingly, no new matter has been entered.

Claim 18 has also been amended to recite that the ratio of glycerol or oil to said polymer particles ranges from 7:1 to 16:1 by weight. Support can be found in dependent claim 19, which has now been cancelled.

Claims 29-32 have been added. Claim 29 depends from independent claim 12 and adds that the type of target surface is selected from the group consisting of concrete, tile, asphalt, grass, wood, soil, floors, walkways, roads, runways, windows, doorknobs, railings, steps, stairways, entryways, walls, weapons, steering columns, and tools. Support for this amendment

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may be found in claim 23 as well as paragraphs [0026], [0029], [0031], [0032] and [0040]-[0044]. Accordingly, no new matter has been added.

Claim 30 depends from independent claim 12 and adds the polymer particles and water are mixed immediately prior to applying to the target surface. Support for this amendment may be found in claim 12 as well as paragraphs [0017] and [0027]. Accordingly, no new matter has been added.

Claims 31 and 32 depend from independent claims 12 and 18, respectively, and add that the thickness of the coating of the anti-traction material is between about 0.009 inches to about 0.030 inches depending on the type of target surface. Support for these amendments may be found in paragraph [0031]. Accordingly, no new matter has been added.

Rejections Under 35 U.S.C. § 103

Claims 1, 4-6, 8, 9, 12-20 and 22-28 stand rejected under 35 U.S.C. § 103 as being obvious over Harlukowicz, et al. (U.S. Patent Number 6,642,351, hereinafter “Harlukowicz”) alone or in combination with Yagi, et al. (U.S. Patent Number 5,258,424, hereinafter “Yagi”).

Independent claims 1 and 18, directed at the coating itself, have been amended to recite that the polymer particles have a mean particle size of less than about 0.5 mm to about 0.425 mm. With respect to Harlukowicz et al, it was stated in the Office Action that “Harlukowicz teaches that the polyacrylamide particles have a particle size of about 300 microns or less, preferably about 150 microns or less.” The Office Action pointed to column 4, lines 56-66 of Harlukowicz. As can be appreciated, independent claims 1 and 18 now recite a mean particle size that is not disclosed or suggested by Harlukowicz, who was not concerned with a coating,

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but with flocculating suspended solids, which understandably would emphasize relatively smaller particle size polymer.

In addition, independent claims 1 and 18 now recite that the ratio water to said polymer particles, or the ratio of glycerol or oil to said polymer particles, ranges from 7:1 to 16:1 by weight. As the Examiner may appreciate, the percent of polymer particles would be 1/7 or 14.28% down to 1/16 or 6.25%.

With the above in mind, Applicants note the statement in the Office Action that Harlukowicz teaches that the aqueous compositions may contain more than 5% of the dispersed polymer by weight. Office Action of March 22, 2007 at page 5. However, the complete section of Harlukowicz that bears consideration is as follows:

“In some cases, the aqueous composition may contain more than 5% of dispersed polymer by weight, based on total weight of aqueous composition, but more typically contain about 5% or less of dispersed polymer, preferably about 2% or less, most preferably about 1% or less, same basis. Col. 6, lines 58-63.

It is respectfully submitted that although Harlukowicz mentions in passing that one might employ more than 5% dispersed polymer by weight, for the purpose of flocculating suspended solids, this is not believed to provide any teaching or suggestion that when seeking to develop an anti-traction material in the form of a viscous gel coating, with particles having a mean particle size of less than about 0.5 mm to about 0.425 mm, one should operate at a ratio of water or glycerol or oil to the polymer particles at a level from 7:1 (14.28%) to 16:1 (6.25%).

Turning to independent claim 12, this claim has been amended to recite that it is directed to a method of reducing mobility over a target surface including, *inter alia*, forming a coating over at least a portion of the target surface. Independent claim 12 has also been amended to emphasize that the ratio of Component 1 (i.e., polymer particles) and Component 2 (i.e., water,

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glycerol, or oil) is “based on, at least in part, a type of said target surface to provide an anti-traction material in the form of a viscous gel coating.” Additionally, independent claim 18 has been amended to emphasize that the method further includes “coating at least a portion of said target surface with said anti-traction material at a thickness based on, at least in part, said type of said target surface to reduce mobility over said portion of said target surface.”

Elaborating on the above, it is noted that Harlukowicz is, as the Examiner recognized, directed at polyacrylamide which is combined in an airborne stream along with a stream of flowing water. Harlukowicz is understood to disclose that the “aqueous composition of the instant invention may be employed to flocculated suspended solids by adding the aqueous composition to the suspended solids in an amount effective to flocculate the solids” (see Harlukowicz, col. 8, lines 55-58). For example, Harlukowicz discloses that the aqueous solution in Example 24 “was used to flocculate a coal refuse slurry (about 5% solids)” and “to flocculate a sewage sludge slurry (about 2% solids)” and that “[s]ettling performance was comparable to performance observed with aqueous compositions formed by conventional methods” (*Id.* at col. 12, lines 45-59). Accordingly, these examples are believed to underscore that Harlukowicz did not teach or ever suggest that his aqueous solutions would be suitable “to form an anti-traction coating material in the form of a viscous gel coating” for “reducing mobility over a target surface” as generally recited in independent method claim 12.

Additionally, Applicants respectfully submit that Harlukowicz is not understood to disclose or suggest that the ratio of the Component 1 (i.e., polymer particles) and Component 2 (i.e., water, glycerol, or oil) is “based on, at least in part, a type of said target surface to provide an anti-traction material in the form of a viscous gel coating” as generally recited in independent method claims 12. As discussed in paragraph [0029] of the present application, the ratio of

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Component 1 and Component 2 is varied depending on the type of surface to which the anti-traction material is to coat. For example, the ratio of Component 1 and Component 2 may be about 1:8 when the anti-traction material is used to coat smooth, non-porous surfaces such as concrete or tile, the ratio of Component 1 and Component 2 may be about 1:10. Alternatively, when the anti-traction material is used to coat rough, porous surfaces, the ratio of Component 1 and Component 2 may be about 1:10 when coating asphalt to about 1:16 when coating grass. Upon critical review of Harlukowicz, Applicants are unable to find any teaching or suggestion for varying the ratio of Component 1 and Component 2 based on, at least in part, the type of the target surface.

Further, Applicants are unable to find any teaching or suggestion in Harlukowicz for “coating at least a portion of said target surface with said anti-traction material at a thickness based on, at least in part, said type of said target surface to reduce mobility over said portion of said target surface” as generally recited in independent method claim 12. As discussed in paragraph [0031] of the present application, “for the anti-traction material to be effective on asphalt, a minimum thickness of about 0.030 may be applied, whereas on tile, a minimum thickness of about 0.009” may be applied.”

As noted above, Harlukowicz is not understood to disclose or suggest that his aqueous solutions would be suitable “to form an anti-traction coating material in the form of a viscous gel coating” to “reduce mobility over said portion of said target surface” as generally recited in independent method claim 12. In addition, as the Examiner correctly recognizes, Harlukowicz is not understood to disclose or suggest forming a coating on a target surface. It therefore follows that Harlukowicz is not understood to disclose or suggest that the thickness of the coating of anti-

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traction material is based on, at least in part, the *type* of target surface as generally recited in independent method claim 12.

Turning to the secondary reference of Yagi et al (5,258,424) it is not believed that Yagi makes up for the deficiencies of Harlukowicz in view of the amendments herein and remarks above. Yagi et al is directed at a film coating composition to control moisture permeability and resistance. Yagi et al was cited in the Office Action of March 22, 2007 for the proposition that although Harlukowicz did not teach or suggest applying his compositions to a target surface, such could be found in Yagi et al. Yagi et al teaches that “[t]he present acrylic resin emulsion *must* be of film forming nature, i.e. *must* form a film when applied and dried or baked at an elevated temperature.” Col. 2, lines 55-57 (emphasis added). This is not understood to provide a viscous gel coating. See again, independent claims 1, 12 and 18. Accordingly, as noted above, even should one combine the subject references (which is not deemed appropriate as one reference is directed at flocculation of suspended solids and the other reference directed at baked coatings) one would not arrive at the features now advanced in the amended claims. It is therefore respectfully submitted that claims herein satisfy the requirements of patentability under 35 USC § 103.

Double Patenting

Applicants also note the provisional nonstatutory obviousness-type double patenting rejection in view of claims 1-8 of U.S. Appl. No. 10/684,427. The Examiner has noted that the Applicants are prepared to file a terminal disclaimer to overcome this rejection.

Early and favorable review is respectfully solicited.

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No claim fee is believed necessary for the addition of four (4) new dependent claims as the number of independent claims and total number of claims does not exceed the number of independent claims and total claims paid at the time of filing the application.

In the event that there are any fee deficiencies, or additional fees are payable, please charge, or credit any overpayment to, our Deposit Account No. 50-2121.

Respectfully submitted,

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